




Study on the characteristics of a generalized Hermite cosh-Gaussian beams propagating through a chiral medium

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Overview

Citations (2)

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Abstract and figures

In this paper, evolution properties of a generalized Hermite cosh-Gaussian (GHchG) beam propagating through a chiral medium are investigated. By using the Huygens–Fresnel integral formula, analytical expression of a GHchG beam in a chiral medium is obtained. We numerically simulate the corresponding beam under both chiral and beam parameters. By controlling these parameters, we can exhibit the GHchG beam in many different intensity modes. Results demonstrate that the chiral factor of the medium and the source beam parameters during beam propagation affect the spatial properties of the GHchG beam in the chiral medium. The results of this work could be shown the helpfulness in understanding the interaction between the GHchG beam and a chiral medium.